

N^o 2880



A.D. 1911

(Under International Convention.)

Date claimed for Patent under Patents and Designs }
Act, 1907, being date of first Foreign Appli- } 4th Feb., 1910
cation (in Germany), }

Date of Application (in the United Kingdom), 4th Feb., 1911

At the expiration of twelve months from the date of the first Foreign Appli-
cation, the provision of Section 91 (3) (a) of the Patents and Designs Act,
1907, as to inspection of Specification, became operative

Accepted, 20th July, 1911

COMPLETE SPECIFICATION.

An Improved Coin-sorting Machine.

I, MAX HOCHGÜRTEL, of Coblenz, Hohenzollernstrasse 20 I, Germany, Merchant, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

- 5 This invention relates to an apparatus for separating a large number of coins mixed without order with regard to size and value and to sort them into separate receivers.

The coins are fed by suitable means in such a manner to a tube, that they will come to lie flat on each other. From this tube the coins are taken singly
10 from below by means of a rotary disc having a plurality of holes and carried along until each coin drops through an opening in a base plate into the respective receiver intended for its reception.

Such method of sorting coins will be chiefly employed with small change, which is different to treat. Therefore, such small change and particularly German
15 coins are referred to in the following specification.

In the accompanying drawing the machine according to the present invention is exemplified. In this drawing:

- Fig. 1 is a cross section along the line A—B in Fig. 3;
Fig. 2 is a cross section along the line C—D in Fig. 3;
20 Fig. 3 is a plan view;
Fig. 4 is a diagram of the holes in the upper rotary disc and the holes in the stationary base plate arranged below.

The sorting operation is as follows:—

- By means of a hopper *a* the unsorted coins are piled on top of each other into
25 a vertical tube *b*. The lowermost coin will fall through the one of the holes *d* in the rotary disc *c*, which is passing the bottom mouth of the tube whilst travelling in the direction of the arrow. This disc *c* is suitably driven by means of a pair of bevel gears *e* and a crank handle and turns on a stationary base plate *f* arranged beneath it. The coin is pushed by the outer edge 2 of the
30 holes to the inside edge 1, and carried along in such position and over the holes *g* with parallel edges arranged in a circle in the base plate, until it falls through

[Price 8d.]



Hochgürtel's Improved Coin-sorting Machine.

one of these holes into a receiver *h* arranged below. By such means all coins of the same size will collect in the same receiver.

For the proper operation of the machine the shape of the holes *d* in the rotary disc is of great importance. The inside edge 1 of all these holes runs along a circular line concentric with the disc. By means of the outer edge 2 which is inclined towards the inside edge 1, the coin, of whatever size it may be, will always be forced towards the inside edge 1, so that also the outer edge of the coins of all sizes will travel along a circular line concentric with the disc.

If the sizes of the coins differ considerably it would be sufficient for the hole to have a simple wedge-like shape, as the outer edges of the coins will find a sufficient bearing on the openings *g*. If, however, the diameters of two coins differ but slightly, say by $\frac{1}{2}$ millimeter only, as this is the case with a five pfennig piece and a one pfennig piece respectively, under the most favourable circumstances a bearing surface of only $\frac{1}{4}$ millimeter width would be available, and this would not always be sufficient, particularly in case the coins have been damaged by use. For enabling the five pfennig piece to travel safely over the opening intended to receive the one pfennig piece, the one pfennig piece is made to travel over a path the diameter of which is smaller than the diameter of the edge 1. At the point where the coin would be held between the converging edges of the hole, the edge 1 is bulged out towards the centre of the disc, so that the one pfennig piece will be moved towards the centre while the five pfennig piece and all larger coins remain on the edge 1. The holes *g* in the base plate are arranged in such a manner, that the smallest coin (here the one pfennig piece) must drop through the first hole, whereas all other coins are passed along over the same hole.

Each subsequent opening *g* is a little wider than the preceding one and narrower than the following one. The number of holes *d* in the rotary disc *c* is optional, whereas the number of openings *g* in the base plate *f* depends on the number of sizes of coins, which are to be sorted.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. Coin sorting machine consisting of a hopper, a vertical tube into which the coins are piled by the hopper one on top of the other, a disc rotatably arranged beneath the mouth of the said tube, a plurality of holes in said rotary disc, a stationary base plate beneath said rotary disc, a number of openings in said base plate corresponding in number and size to the number and size of coins to be sorted, receivers beneath said base plates, one each provided for each kind of coin to be sorted, and means for rotating said rotary disc.

2. Coin sorting machine consisting of a hopper, a vertical tube into which the coins are piled by the hopper one on top of the other, a disc rotatably arranged beneath the mouth of said tube, a plurality of holes in said rotary disc, a stationary base plate beneath said rotary disc, a number of openings in said base plate corresponding in number and size to the number and size of coins to be sorted, receivers beneath said base plate, one each provided for each kind of coin to be sorted, means for rotating said rotary disc, the said holes in the rotary disc of a shape adapted to move the coins by means of the edges of said holes into different circular paths and to carry the coins along in such circular paths, until they reach an opening in the base plate of a size adapted to receive them.

3. Coin sorting machine consisting of a hopper, a vertical tube into which the coins are piled by the hopper one on top of the other, a disc rotatably arranged beneath the mouth of the said tube, a plurality of holes in said rotary disc, a stationary base plate beneath said rotary disc, a number of openings in said base plate corresponding in number and size to the number and size of coins to be sorted, receivers beneath said base plate, one each provided for each

Hochgürtel's Improved Coin-sorting Machine.

kind of coin to be sorted, means for rotating said rotary disc, the said holes in the rotary disc of a shape adapted to move the coins by means of the edges of said holes into different circular paths and to carry the coins along in such circular paths until they reach an opening in the base plate of a size adapted
5 to receive them, the said openings in the base plate having parallel concentric edges.

Dated this 4th day of February, 1911.

CHATWIN, HERSCHELL & Co.,
22, Gray's Inn Road, London, W.C.,
Patent Agents for the Applicant.

10

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1911.

Fig. 1.

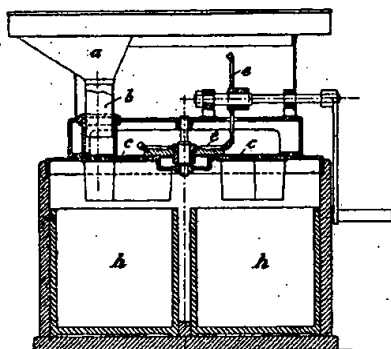


Fig. 3.

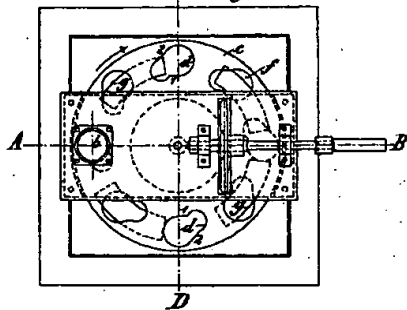


Fig. 2.

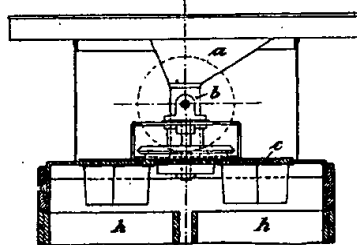
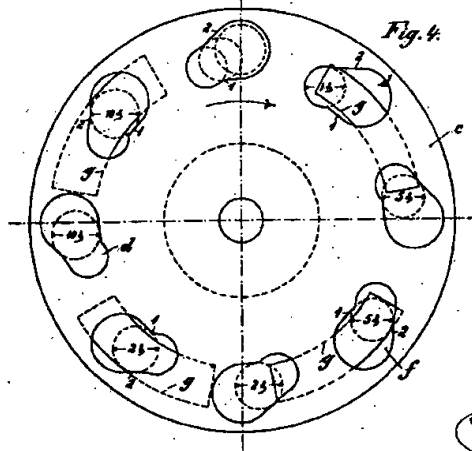


Fig. 4.

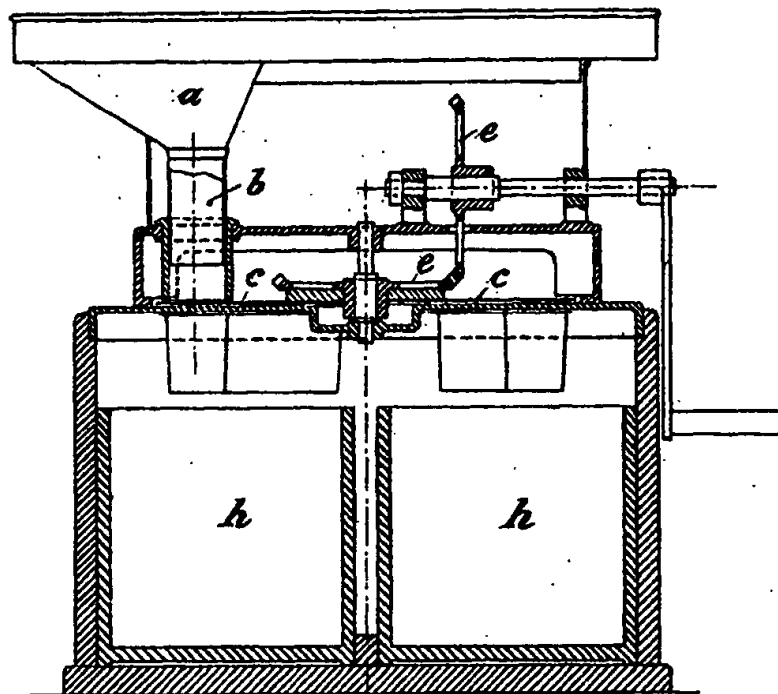


BIRMINGHAM
FREE
LIBRARIES

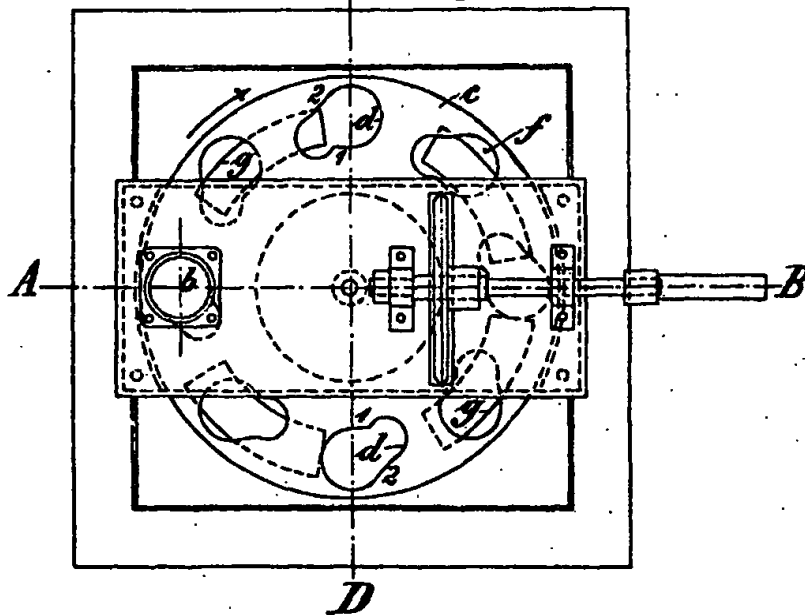
[This Drawing is a reproduction of the Original on a reduced scale.]

BEST AVAILABLE COPY

Fig. 1.



C Fig. 3.



[This Drawing is a reproduction of the Original on a reduced scale.]

BEST AVAILABLE COPY

Fig. 2.

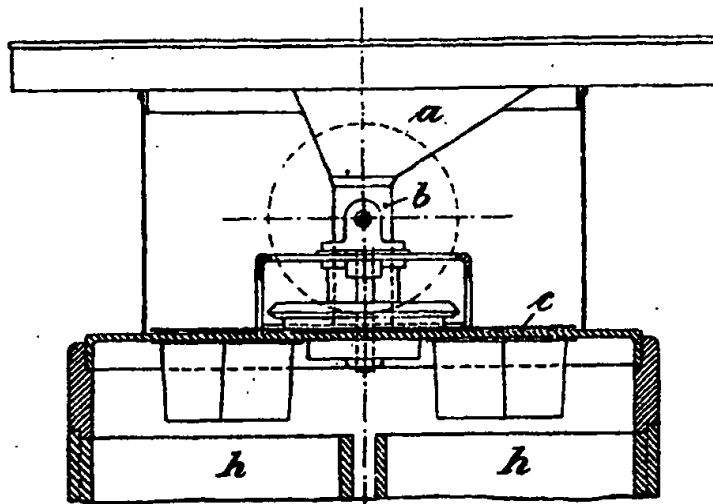
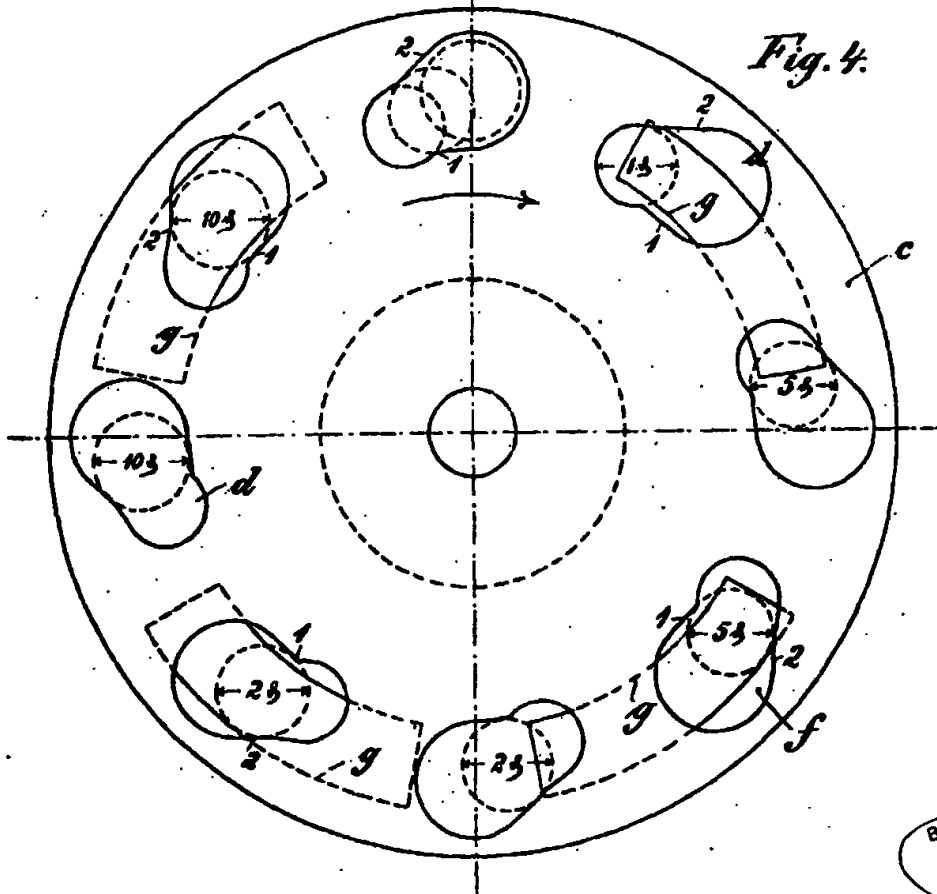


Fig. 4.



BIRMINGHAM
FREE
LIBRARIES.

BEST AVAILABLE COPY